REMARKS

The present Amendment amends claims 1, 5, 9, 13 and 17-26 and leaves claims 2-4, 6-8 and 10-12 unchanged. Therefore, the present application has pending claims 1-26.

Claims 18-20, 22 and 23 stand objected to due to informalities noted by the Examiner in paragraphs 1 and 2 of the Office Action. Various amendments were made throughout claims 18-20, 22 and 23 so as to correct the informalities noted by the Examiner. Therefore, this objection is overcome and should be withdrawn.

Claims 1-5, 7, 8, 13, 15, 16, 21 and 23 stand rejected under 35 USC §102(e) as being anticipated by Sandhu (U.S. Patent No. 6,438,389); claims 9, 11, 12, 17, 19, 20, 24 and 26 stand rejected under 35 USC §103(a) as being unpatentable over Sandhu in view of Yun (U.S. Patent No. 6,600,934); and claims 6, 10, 14, 18, 22 and 25 stand rejected under 35 USC §103(a) as being unpatentable over Sandhu in view of Krile (U.S. Patent No. 6,229,486). These rejections are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-26 are not taught or suggested by Sandhu, Yun and Krile whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to the claims so as to clarify that the present invention is directed to a method, transmitter and receiver of selecting an optimum set of antennas from a plurality of antennas for use by a transmitter or a receiver having a plurality of RF chains to transmit and/or receive a wireless signal on

wireless link or network. According to the present invention, information concerning the transmission of wireless signals on the wireless link is determined and such information is used to select an optimum set of antennas. The information is also used to optimize the wireless link according to predetermined criteria. The optimum set of antennas is a set number of the plurality of antennas. The RF chains are connected to the optimum set of antennas to permit transmission and/or reception of wireless signals on the wireless link. According to the present invention the RF chains correspond in number to the set number of antennas in the optimum set of antennas and the number of antennas included in the plurality of antennas is greater than the number of RF chains.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Sandhu whether taken individually or in combination with any of the other references of record. Sandhu merely teaches a wireless communication system with an adaptive beam selection feature. Sandhu teaches, for example, in Fig. 1 thereof that the wireless communication system has several antennas 1, 2, 3, 4 that are electronically controlled to form N distinct beams which are either directional or sector beams. As taught by Sandhu each of the N beams is periodically measured for signal quality for each mobile subscriber. Thereafter, Sandhu teaches that the two best beams are selected for communication with the subscriber.

The above described teaching of Sandhu is entirely different from that of the present invention. The present invention is intended to select an optimal set of antennas wherein the optimal set of antennas is set number of the antennas contrary

to that taught by Sandhu. Sandhu is directed to selecting at least two beams so as to conduct communications with a particular subscriber. The selection of at least two beam as taught by Sandhu is not related to the selection of an optimal number of antennas to be used with a fixed number of RF chains so as to conduct transmissions and receptions as in the present invention. The selection of at least two beams taught by Sandhu is not concerned with the number of antennas that are selected and whether the number of antennas correspond to the number of RF chains as in the present invention.

Thus, Sandhu fails to teach or suggest determining information concerning transmission of wireless signals on the wireless link and selecting an optimal set of antennas from the antennas based on the information wherein the optimal set of antennas is a set number of the antennas as recited in the claims.

Further, Sandhu fails to teach or suggest that the RF chains correspond in number to the set number of antennas in the optimal set of antennas and the number of antennas included in the antennas is greater than the number of RF chains as recited in the claims.

Therefore, as is quite clear from the above, the features of the present invention now more clearly recited in the claims are not taught or suggested by Sandhu. Accordingly, reconsideration and withdrawal of the 35 USC §102(e) rejection of claims 1-5, 7, 13, 15, 16, 21 and 22 as being anticipated by Sandhu is respectfully requested.

The above noted deficiencies of Sandhu are not supplied by any of the other references of record particularly Yun and Krile. Therefore, combining the teachings

of Sandhu with one or more of Yun and Krile still fails to teach or suggest the features of the present invention as now clearly recited in the claims.

Yun merely teaches a device and method in which a base station selects a transmission antenna corresponding to an antenna selection signal from a terminal. This teaching of Yun is not concerned with selecting the optimal set of antennas based on the information concerning the transmission of wireless signals on the wireless link nor is it concern with matching the set number of antennas in the optimal set of antennas to the number of RF chains as in the present invention.

The same deficiencies of both Sandhu and Yun are also evident in Krile. Krile simply teaches a subscriber based smart antenna wherein each subscriber unit has a smart antenna which consists of antenna elements, the beams of which are selected based upon quality information. However, here again there is no concern in Krile of the selection of an optimal set of antennas based on information concerning transmission of wireless signals on the wireless link and matching the number of RF chains to the set number of antennas in the optimal set of antennas as in the present invention.

Therefore, combining Sandhu with one or more of Yun and Krile still fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 9, 11, 12, 17, 19, 20, 24 and 26 under 35 USC §103(a) as being unpatentable over Sandhu in view Yun and reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 6, 10, 14, 18, 22 and 25 as being unpatentable over Sandhu in view of Krile are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-26.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-26 are in condition for allowance. Accordingly, early allowance of claims 1-26 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (530.38358X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

Carl I. Brundidge
Registration No. 29,621

CIB/jdc
(703) 312-6600